

# Principles That Identify Orthomolecular Medicine

## A Unique Medical Specialty

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In 1968 Linus Pauling coined the word "Orthomolecular" to denote the use of naturally occurring substances, particularly nutrients, in maintaining health and treating disease. At that time megadose niacin therapy for schizophrenia and dietary treatment of "hypoglycemia" were the major focus of the movement. Since then Orthomolecular psychiatry and medicine have emerged as a distinct and important specialty area in medical practice.

In the meantime, other medical movements have sprung up out of the public demand for Hope in the face of a worsening epidemic of cancer, heart attacks and mental illness and in response to the outcry against adverse effects of modern medical treatments and invasive diagnostic and intensive care procedures.

Alternative therapies have come forward to fill the vacuum left by modern Medicine, which failed to provide effective treatments for the major epidemic diseases and in protest against Medicine's over-reliance on pharmacology, for the drug treatments seem to have fostered the epidemic of drug-dependence which is the major epidemic of our time. The public majority were ready for a new medicine based on non-toxic, non-invasive, "natural" medicines to go with the re-discovered "natural foods".

Holistic medicine became a rallying point for the New Medicine by putting nutrition, exercise and meditation ahead of surgery, radiation and drugs. It was an answer to the adverse effects of MegaMedicine, the cut burn and poison approach to "health". And, since holistic medicine did not focus on basic science data, it did not force a paradigm shift in the medical establishment.

Orthomolecular, on the other hand, because it is identified with Linus Pauling, our greatest living scientist, and because it rests on vast

body of research in the basic and clinical sciences, does force a major revision in medical thinking. Nutrition, which has been the stepchild of medicine and generally considered a dead issue in medicine, suddenly is at the crux of this new medical movement.

No wonder then, that Orthomolecular became a buzzword to the medical establishment, who saw it only as megavitamins and judged it as quackery. By contrast, the word, Holistic, became the subject of numerous symposia and journal articles, welcomed by editors eager to promote the image of modern Medicine as a progressive and responsive institution.

But as it gained supporters, Holistic Medicine also gained additional theories and practices, some of dubious value, some downright unscientific. Even the most broad-minded and liberal-minded editor had to recoil from permitting such things as psychic healing and kinesiology within the pages of a referred journal.

Soon the word "Alternative" came to replace Holistic in the medical journals. Now the establishment could pick and choose individually between the various therapies that had gathered under the holistic umbrella; nutrition, biofeedback, chiropractic, acupuncture, herbalism, homeopathy, massage, hypnosis, iridology, kinesiology, astrology, psychic healing and other intuitive therapies, to name a few.

The Orthomolecular movement was faltered with identity confusion and, in fact, many of our own members seem to have chosen Holistic as their preferred badge-word. This is good for the short run, I agree: it is attractive to patients and profitable while being non-controversial and safer professionally as well.

In the long run, however, I think Holistic Medicine has no future. It has already lost its identity, except as a clearing house for medical novelty. Most important, because it does not identify strongly with science it has lost

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credibility.

Meantime, Orthomolecular Medicine retains its scientific reason for being: its basic science foundations of nutrition, biochemistry and clinical nutrition have grown at a prodigious rate. Megavitamin niacin therapy, which was once considered dangerous and controversial in treating schizophrenia, is now the standard of care in the hyperlipidemias. What began as a megavitamin therapy now employs a broad data base and a variety of therapies applicable to numerous medical and psychiatric conditions.

It is ironic that this positive growth of Orthomolecular science and therapy has actually clouded the identity of the Orthomolecular movement. On the one hand we are confused with Holistic Medicine; on the other we are seen only as the avant garde of orthodox Medicine. In hopes of defining our true identity, let me update the concept of Orthomolecular Medicine as a new medical specialty.

First of all, the Orthomolecular data base rests strongly on the following areas of scientific knowledge:

1. nutrition.
2. biochemistry,
3. cell biology,
4. physiology,
5. general medicine,
6. immunology,
7. allergy,
8. endocrinology,
9. pharmacology,
10. toxicology,
11. gastroenterology,
12. parasitology,
13. nephrology,
14. physical medicine and manipulation therapies,
15. dentistry,
16. veterinary science,
17. food science,
18. agriculture,
19. climatology,
20. medical politics.

The following therapeutic modalities fit the definition of Orthomolecular:

1. vitamins,
2. minerals,
3. amino acids,
4. essential fatty acids,
5. fiber,
6. enzymes,
7. antibodies,
8. antigens,

9. cell therapy,
10. chelation therapy,
11. dialysis,
12. plasmapheresis,
13. hydrotherapy,
14. thermal therapy,
15. phototherapy,
16. electrotherapy (including electroconvulsive therapy),
17. air ion therapy,
18. light therapy,
19. solar therapy,
20. acupuncture,
21. mas sage,
22. exercise,
23. biofeedback,
24. hypno therapy and other psychotherapies

All of the Orthomolecular practice rests on a foundation of basic science advances in biochemistry, biophysics, physiology, Psychophysiology and ecology. We do not eschew drug therapy or pharmacology; but we do recognize their limitations and their potential for toxicity. Orthomolecular knowledge gives a greater choice of benefits for our patients and with less risk of adverse affects.

Aside from these areas of interest, there are by now some well defined beliefs and principles that also distinguish the Orthomolecular practitioner from orthodox health practitioners. These principles actually are an important part of our professional identity. Just as knowledge of science and therapeutics might be thought of as our Ego, these principles make up our professional conscience or Superego. The desire to be in the avant garde of medical progress, to share the excitement of discovery, no doubt, is a major source of our motivational energy or libido, our medical Id, as it were. No, the love of our grateful patients, those we are privileged to heal and comfort, this must be the ultimate motive.

At any rate, I think you will agree that the Orthomolecular professional is a different personality, with different beliefs and values than most present-day practitioners of medical orthodoxy. Of course all physicians do cherish our Hippocratic oath, but the Orthomolecular identity confers upon us additional values and beliefs. Hippocrates first rule was: "Primum non nocere," i.e. "first, do no harm". We in Orthomolecular practice have less need for the primacy of that rule, for it is already implicit in the essence of Orthomolecular practice, which is:

"put nutrition first".

Here is a list of 15 principles that identify the "spirit" of Orthomolecular Medicine:

1. Orthomolecules come first in medical diagnosis and treatment. Knowledge of the safe and effective use of nutrients, enzymes, hormones, antigens, antibodies and other naturally occurring molecules is essential to assure a reasonable standard of care in medical practice.

2. Orthomolecules have a low risk of toxicity. Pharmacological drugs always carry a higher risk and are therefore second choice if there is an Orthomolecular alternative treatment.

3. Laboratory tests are not always accurate and blood tests do not necessarily reflect nutrient levels within specific organs or tissues, particularly not within the nervous system. Therapeutic trial and dose titration is often the most practical test.

4. Biochemical individuality is a central precept of Orthomolecular Medicine. Hence, the search for optimal nutrient doses is a practical issue. Megadoses, larger than normal doses of nutrients, are often effective but this can only be determined by therapeutic trial. Dose titration is indicated in otherwise un-

responsive cases.

5. The Recommended Daily Allowance (RDA) of the United States Food and Nutrition Board are intended for normal, healthy people. By definition, sick patients are not normal or healthy and not likely to be adequately served by the RDA.

6. Environmental pollution of air, water and food is common. Diagnostic search for toxic pollutants is justified and a high "index of suspicion" is mandatory in every case.

7. Optimal health is a lifetime challenge. Biochemical needs change and our Orthomolecular prescriptions need to change based upon follow-up, repeated testing and therapeutic trials to permit fine-tuning of each prescription and to provide a degree of health never before possible.

8. Nutrient related disorders are always treatable and deficiencies are usually curable. To ignore their existence is tantamount to malpractice.

9. Don't let medical defeatism prevent a therapeutic trial. Hereditary and so-called 'incurable' disorders are often responsive to Orthomolecular treatment.

10. When a treatment is known to be safe and possibly effective, as is the case in much of Orthomolecular therapy, a therapeutic trial is mandated.

11. Patient reports are usually reliable. The patient must listen to his body. The physician must listen to his patient.

12. To deny the patient information and access to Orthomolecular treatment is to deny the patient informed consent for any other treatment.

13. Inform the patient about his condition; provide access to all technical information and reports; respect the right of freedom of choice in medicine.

14. Inspire the patient to realize that Health is not merely the absence of disease but the positive attainment of optimal function and

**FACTOR**

GOAL

DIAGNOSIS

TREATMENT

ECOLOGIC VIEW

ETHIC

UNPROVEN REMEDY

DOUBLE-BLIND  
STUDIES

PATIENT REPORTS

RESPONSIBILITY

PLACEBO EFFECT

MEGAVITAMINS

INCURABLES

**ORTHOMOLECULAR**

cure of cause

nutrient levels history,  
physical wellness model  
ecologic view

Orthomolecular  
exercise  
meditation

in focus on nutrient and  
toxic factors

safety first

often useful on individual  
basis

false negatives occur; good  
treatment is lost

usually correct

patient is educated and  
responsible

useful adjunct

safe, effective medical  
therapy

treat; offer hope

**ORTHODOXY**

palliation of symptom

chemistry levels history,  
physical disease model germ  
theory

surgery  
radiation  
pharmacology

hazy on diet, ecology and  
toxics factors

efficacy first

always quackery;  
do not use — too risky

infallible standard of proof;  
accept no therapy without it  
unreliable data

patient is ignorant and  
incompetent

suspect, dishonorable

unsafe, unproved worthless  
therapy

don't treat; offer no "false"  
hope

well-being.

15. Hope is therapeutic and Orthomolecular therapies always are valuable as a source of Hope. This is ethical so long as there is no misrepresentation or deception.

The preceding tabulation further clarifies the role of Orthomolecular Medicine in relation to medical orthodoxy.

The essentials boil down to 7 cardinal rules;

1. Nutrition comes first in medical diagnosis and treatment.
2. Drug treatment is used only for specific indications and always with an eye to the potential dangers and adverse effects.
3. Environmental pollution and food adulteration are an inescapable fact of modern life and are a medical priority.

4. Biochemical individuality is the norm in medical practice; therefore stereotyped RDA values are unreliable nutrient guides.

5. Blood tests do not necessarily reflect tissue levels of nutrients.

6. Nutrient diagnosis is always defensible because nutrient related disorders are usually treatment responsive or curable.

7. Hope is an indispensable ally of the physician and an absolute right of the patient.

Finally, let me repeat, that our rallying point and badge-word must be "Orthomolecular", a landmark concept that conveys the genius of Dr. Pauling, who saw the need to resurrect nutrition and put it first, not last, in our science of health and disease.